

Office of Cancer Genomics Program Flowchart

This flowchart depicts how the three OCG-supported programs function and interact with one another to move toward the development of novel cancer therapeutics.

Cancer Genome Characterization Initiative

The Cancer Genome Characterization Initiative (CGCI) collects matched adult and pediatric cancer and normal tissue. Sequencing and genome-wide analysis is performed on the tissues. The resulting genomic data is made available to the research community and also feeds into CTD². In addition, genomic data from CGCI contributes to the potential development of novel targeted therapies through efforts not directly supported by OCG.

Therapeutically Applicable Research to Generate Effective Treatments

Therapeutically Applicable Research to Generate Effective Treatments (TARGET) collects matched primary and relapse (if available) pediatric cancer and normal tissue from clinical and biological studies. Genome-wide molecular characterization by sequencing is performed on the tissues. The resulting genomic data is made available to the research community and also feeds into CTD². In addition, genomic data from TARGET contributes to the potential development of novel targeted therapies through efforts not directly supported by OCG.

Cancer Target Discovery and Development

Cancer Target Discovery and Development (CTD²) mines large genomic data sets from programs like CGCI and TARGET to identify alterations important to cancer initiation and progression. They then identify candidate alterations for therapeutic targets and biomarkers of risk classification. CTD² then performs functional analyses on candidate alterations using approaches such as shRNA and small molecule screens and the development of new model systems. Functional analysis leads to the potential development of novel targeted therapies.